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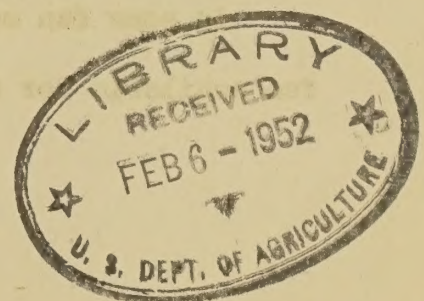
3 PORTABLE ELECTRIC HEATERS //

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Almost every home needs extra heat at times. A portable electric heater will supply this effectively, conveniently and safely. These heaters are not a substitute for general all-over heating, but are ordinarily used to supply additional heat in such rooms as bedrooms, children's rooms and sick-rooms. In addition, they are useful for drying babies' clothes, stockings, and other small articles of clothing. Another factor in favor of the portable electric heater is that it supplies heat without smoke, soot, odors or grease, flames or fumes, dirt, dust, or excessive moisture -- because it has no products of combustion.

Types of Heaters: There are two basic types of electric heaters -- radiant heaters and convection heaters. Sometimes there is reference to a third type, the motor-driven fan heater. This is really a combination of the radiant and convection heater.

The radiant heater does not heat the air; rather, it heats any object directly in the path of its beam. The heating element of this type usually consists of a heater wire wound on a ceramic tube or cone located in the reflector bowl. Usually this type produces a cheerful glow in the room. The bowl reflects or throws the heat out to reach anything in its path. All of these heaters are covered with a wire grill to prevent combustible material (such as clothing) from touching the heating element and burning.



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The convection heater warms objects by first heating the air which surrounds it. An opening at the bottom of the frame of the heater permits the cold air to be drawn in and passed over the heating elements for warming. The warm air is then released through a top opening to warm the room. The distribution of heat is somewhat dependent on the air currents in the room.

The cost of operating the heaters varies according to the rate paid for electricity. Ordinarily, however, it will be about 3¢ to 8¢ per hour, at a rate of 5¢ per kwh.

Some Differences in Heater Models

Radiant Heaters: The bowl model is probably more common than other kinds. This heater will heat anything in its path; the bowl reflector can be adjusted to throw the beam of heat in any direction. It is light in weight and may be moved around easily. Other heaters of this type are constructed with heating elements that are tubular or spirally shaped. These elements are mounted vertically or horizontally in a metal cabinet with grills through which the heat is reflected.

An infra-red lamp heater is devised by inserting a given number of infra-red lamps in the back of a specially constructed cabinet.

Fan or Air Circulators: The cabinets of these heaters may be circular, square, or oblong in shape. The motor-driven fan circulates the air which passes over the heating unit and out into the room. Some fan models remain stationary, while others oscillate. The oscillating action spreads the heated air, and in addition beams it up or down.

In some fan models, the heating element is removable. This makes the fan available for summer use.

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Portable Radiators: These heaters are operated with steam or water.

Some models come with the proper amount of water and anti-freeze to operate over a considerable period of time before needing refilling. The steam heating type requires refilling about every 100 hours. The cold air is drawn in at the bottom, passes through a special core for warming, then circulates all through the room. A desirable feature for this type is an automatic control to limit the pressure inside the radiator.

Some radiator-type heaters operate on a dual heat principle. The outer surface radiates heat in all directions, while the convected heat is discharged through vents, which raises and maintains room temperature. Some also are equipped with an automatic thermostat, to control the operation for desired room temperature. One model comes equipped with casters for ease in moving it where needed.

Convection Heaters: The heating element in this type of heater is usually somewhat larger, since heat transmission comes mainly from the natural circulation of warmed air rising and being replaced by cooler air. The heating elements are located in oval, rectangular or square metal cabinets. The bottom, sides and top of the cabinet are constructed with vents and grills, for free circulation of air.

Selection of a Heater

The portable electric heater is 100 percent effective in the conversion of electric energy into heat. However, it is important to remember that heaters differ in the extent to which they can effectively direct the heat which is generated. Economical heating results depend to a great extent on the proper selection of a heater.

4-Portable Electric Heaters

Some of the desirable features to consider are: (1) sturdy and compact construction; (2) good balance to prevent tipping; (3) lightness in weight for convenient carrying; (4) a cabinet of durable finish; (5) handles conveniently located and heat-resistant.

For safety, look for the U-L label, the seal of the Underwriters' Laboratories. This is sponsored by the National Board of Fire Underwriters, and the label means that the heater has been tested and approved. It also means that the heater is so well designed that in ordinary usage nothing inflammable will come in contact with the heating element and produce a fire hazard. Neither will it tip over in normal use, and set fire to anything against which it falls. A very good guarantee is to purchase a heater made by a reliable manufacturer, from a dealer who will stand behind his merchandise from the point of both quality and service.

Installation and Care of Portable Heaters: Heaters may be used wherever there is an electrical outlet, provided the wiring circuit is heavy enough to carry the rated wattage load of the heater and other appliances in use on the circuit. 1620 is the maximum wattage permitted for portable heaters for home use. Larger wattage heaters require circuits of 220 to 230 volts, and these are not commonly available in homes. This is protection for safety in operation, as well as efficient use of electricity.

In caring for a portable heater, the manufacturer's instruction should be followed. It is well, however, to remember the following general rules: Clean out all dust and lint regularly. Wipe cabinet and trim finishes with a damp cloth and dry thoroughly. Never permit water to touch the heating element. Disconnect all heaters when not in use.